

Clean copies of the claims as amended in this document are provided below — following the signature page.

Kindly change claims 3 through 5, and claims 7, 66 and 67; and also add new claims 80 through 96, all to read as follows, newly inserted words being presented underscored, thus, and deleted words being presented in square brackets [thus]. For the Examiner's convenience, the new claims are inserted in the claim sequence at the points where proposed — namely, new 80 through 86 following claim 2; new 87 and 88 following claim 7; and 89 through 96 following 73.

1    80.    (new, to follow claim 2)    The projector of claim 2,  
2    further comprising:  
3            means for also incorporating blue and green laser light  
4    into the picture beam; and  
5            separate, additional reflective liquid-crystal light  
6    valves for modulating the blue and green light respectively.

1    81.    (new, to follow claim 80)    The projector of claim 80,  
2    wherein:  
3            said light valve also receives blue and green laser  
4    light for modulation, within the same light valve.

1    82.    (new, to follow claim 81)    The projector of claim 2,  
2    further comprising:  
3            means for scanning the beam across a face of the light  
4    valve during projection of each image, rather than flooding  
5    the entire face substantially simultaneously.

1 83. (new, to follow claim 82) The projector of claim 82,  
2 further comprising:  
3 means for also incorporating blue and green laser light  
4 into the picture beam; and  
5 separate, additional reflective liquid-crystal light  
6 valves for modulating the blue and green light respectively.

1 84. (new, to follow claim 83) The projector of claim 82,  
2 wherein:  
3 said light valve also receives blue and green laser  
4 light for modulation, within the same light valve.

1 85. (new, to follow claim 84) The projector of claim 82,  
2 wherein:  
3 the laser apparatus comprises no solid-state lasers,  
4 but rather exclusively lasers of gas type.

1 86. (new, to follow claim 85) The projector of claim 2,  
2 wherein:  
3 the laser apparatus comprises no solid-state lasers,  
4 but rather exclusively lasers of gas type.

1 3. The projector of claim 86 [1], wherein:  
2 said apparatus projects a beam of wavelength between  
3 about 635 and 650 nanometers.

1 4. (amended) The projector of claim 1, wherein:  
2 said apparatus projects a beam of wavelength substan-  
3 tially [about] 647 nanometers.

1 5. The projector of claim 4 [1], wherein:  
2 the image is a moving picture.

1 7. The projector of claim 6, wherein:  
2 the further laser apparatus projects substantially cyan  
3 native laser light with the blue or green light, or both.

1 87. (new, to follow claim 7) The projector of claim 6,  
2 further comprising:  
3 means for also incorporating the blue and green laser  
4 light into the picture beam; and  
5 separate, additional reflective liquid-crystal light  
6 valves for modulating the blue and green light respectively.

1 88. (new, to follow claim 87) The projector of claim 6,  
2 wherein:  
3 said light valve also receives the blue and green laser  
4 light for modulation, within the same light valve.

1 66. (amended) A laser projection system for forming an  
2 image on an irregular projection medium having portions at  
3 distinctly differing distances from the projector; said  
4 system comprising:  
5 laser apparatus for projecting a picture beam that  
6 includes laser light;  
7 a liquid-crystal light valve for impressing an image  
8 onto the beam; and  
9 means for projecting the beam from the light valve,  
10 with said impressed image, onto such irregular projection  
11 medium as a show for an audience.

1 67. The system of claim 66, wherein:

2 the irregular projection medium comprises one or more  
3 projection media [is] selected from the group consisting of:

4  
5 an interior of a dome, or other building having  
6 internal surfaces that are not generally  
7 normal to a projection direction,  
8 an exterior of a dome, sculpture, monument, or  
9 other structure having external surfaces that  
10 are not generally normal to a projection  
11 direction,

12 a waterfall,

13 a water fountain,

14 fog or a cloud,

15 ice,

16 a scrim in front of a curtain or screen,

17 a plurality of scrims in optical series,

18 one or more trees,

19 grass, vines or other foliage,

20 a hillside or other landscape, or other receding  
21 surface, and

22 an array of people or other animals or other dis-  
23 crete objects, or combinations thereof, at  
24 diverse distances from the projecting means;  
25 and

26  
27 the projecting means display a protracted show on the  
28 one or more projection media, for the audience.

1 89. (new, to follow claim 73) The projector of claim 66:  
2 wherein the laser apparatus projects red laser light in  
3 the picture beam; and  
4 the light valve impresses red components of an image  
5 onto the red laser light; and  
6 further comprising:  
7  
8 means for also incorporating blue and green laser  
9 light into the picture beam, and  
10  
11 separate, additional liquid-crystal light valves for  
12 respectively impressing blue and green components  
13 of the image onto the blue and green light.

1 90. (new, to follow claim 89) The projector of claim 66,  
2 wherein:  
3 said light valve receives laser light components of  
4 three respective colors and impresses corresponding color  
5 components of the image onto the three respective light com-  
6 ponents, respectively, all within the same light valve.

1 91. (new, to follow claim 90) A laser projection system  
2 for forming an image on an irregular projection medium  
3 having portions at distinctly differing distances from the  
4 projector; said system comprising:  
5 laser apparatus for projecting a picture beam that  
6 includes laser light;  
7 a liquid-crystal light valve for impressing an image  
8 onto the beam; and  
9 means for projecting the beam from the light valve,  
10 with said impressed image, onto such irregular projection  
11 medium to form a substantially sharp image on such medium at  
12 such distinctly differing distances.

1 92. (new, to follow claim 91) The system of claim 91,  
2 wherein:

3 the irregular projection medium comprises one or more  
4 projection media selected from the group consisting of:

5  
6 an interior of a dome, or other building having  
7 internal surfaces that are not generally  
8 normal to a projection direction,  
9 an exterior of a dome, sculpture, monument, or  
10 other structure having external surfaces that  
11 are not generally normal to a projection  
12 direction,  
13 a waterfall,  
14 a water fountain,  
15 fog or a cloud,  
16 ice,  
17 a scrim in front of a curtain or screen,  
18 a plurality of scrims in optical series,  
19 one or more trees,  
20 grass, vines or other foliage,  
21 a hillside or other landscape, or other receding  
22 surface, and  
23 an array of people or other animals or other dis-  
24 crete objects, or combinations thereof, at  
25 diverse distances from the projecting means;  
26 and

27  
28 the projection means form the substantially sharp image  
29 on substantially each element of the selected one or more  
30 media.



1 93. (new; to follow claim 92) A laser projector  
2 comprising:  
3 laser apparatus for projecting a picture beam that  
4 includes visible laser light of wavelength longer than 640  
5 nanometers; and  
6 a reflective liquid-crystal light valve for modulating  
7 the beam with a desired image.

1 94. (new; to follow claim 93) The projector of claim 93,  
2 wherein:  
3 said apparatus projects a beam of wavelength substan-  
4 tially 647 nanometers.

1 95. (new, to follow claim 86) The projector of claim 93:  
2 wherein the light valve impresses red components of an  
3 image onto the laser light of wavelength longer than 640  
4 nanometers; and  
5 further comprising:  
6  
7 means for also incorporating blue and green laser  
8 light into the picture beam, and  
9  
10 separate, additional liquid-crystal light valves for  
11 respectively impressing blue and green components  
12 of the image onto the blue and green light.

1 96. (new, to follow claim 95) The projector of claim 93,  
2 wherein:  
3 said light valve receives laser light components of  
4 three respective colors and impresses corresponding color  
5 components of the image onto the three respective light com-  
6 ponents, respectively, all within the same light valve.

CLEAN COPIES of the amended AND NEW claims:

1    80.    (new, to follow claim 2)    The projector of claim 2,  
2    further comprising:  
3            means for also incorporating blue and green laser light  
4    into the picture beam; and  
5            separate, additional reflective liquid-crystal light  
6    valves for modulating the blue and green light respectively.

1    81.    (new, to follow claim 80)    The projector of claim 80,  
2    wherein:  
3            said light valve also receives blue and green laser  
4    light for modulation, within the same light valve.

1    82.    (new, to follow claim 81)    The projector of claim 2,  
2    further comprising:  
3            means for scanning the beam across a face of the light  
4    valve during projection of each image, rather than flooding  
5    the entire face substantially simultaneously.

1    83.    (new, to follow claim 82)    The projector of claim 82,  
2    further comprising:  
3            means for also incorporating blue and green laser light  
4    into the picture beam; and  
5            separate, additional reflective liquid-crystal light  
6    valves for modulating the blue and green light respectively.

1 84. (new, to follow claim 83) The projector of claim 82,  
2 wherein:

3 said light valve also receives blue and green laser  
4 light for modulation, within the same light valve.

1 85. (new, to follow claim 84) The projector of claim 82,  
2 wherein:

3 the laser apparatus comprises no solid-state lasers,  
4 but rather exclusively lasers of gas type.

1 86. (new, to follow claim 85) The projector of claim 2,  
2 wherein:

3 the laser apparatus comprises no solid-state lasers,  
4 but rather exclusively lasers of gas type.

1 3. The projector of claim 86, wherein:

2 said apparatus projects a beam of wavelength between  
3 about 635 and 650 nanometers.

1 4. (amended) The projector of claim 1, wherein:

2 said apparatus projects a beam of wavelength substan-  
3 tially 647 nanometers.

1 5. The projector of claim 4, wherein:

2 the image is a moving picture.

1 7. The projector of claim 6, wherein:  
2 the further laser apparatus projects substantially cyan  
3 native laser light with the blue or green light, or both.

1 87. (new, to follow claim 7) The projector of claim 6,  
2 further comprising:  
3 means for also incorporating the blue and green laser  
4 light into the picture beam; and  
5 separate, additional reflective liquid-crystal light  
6 valves for modulating the blue and green light respectively.

1 88. (new, to follow claim 87) The projector of claim 6,  
2 wherein:  
3 said light valve also receives the blue and green laser  
4 light for modulation, within the same light valve.

1 66. (amended) A laser projection system for forming an  
2 image on an irregular projection medium having portions at  
3 distinctly differing distances from the projector; said  
4 system comprising:  
5 laser apparatus for projecting a picture beam that  
6 includes laser light;  
7 a liquid-crystal light valve for impressing an image  
8 onto the beam; and  
9 means for projecting the beam from the light valve,  
10 with said impressed image, onto such irregular projection  
11 medium as a show for an audience.

1     67.   The system of claim 66, wherein:

2             the irregular projection medium comprises one or more  
3     projection media selected from the group consisting of:

4  
5             an interior of a dome, or other building having  
6                 internal surfaces that are not generally  
7                 normal to a projection direction,  
8             an exterior of a dome, sculpture, monument, or  
9                 other structure having external surfaces that  
10                 are not generally normal to a projection  
11                 direction,

12             a waterfall,

13             a water fountain,

14             fog or a cloud,

15             ice,

16             a scrim in front of a curtain or screen,

17             a plurality of scrims in optical series,

18             one or more trees,

19             grass, vines or other foliage,

20             a hillside or other landscape, or other receding  
21                 surface, and

22             an array of people or other animals or other dis-  
23                 crete objects, or combinations thereof, at  
24                 diverse distances from the projecting means;  
25             and

26  
27             the projecting means display a protracted show on the  
28     one or more projection media, for the audience.

1 89. (new, to follow claim 73) The projector of claim 66:  
2 wherein the laser apparatus projects red laser light in  
3 the picture beam; and  
4 the light valve impresses red components of an image  
5 onto the red laser light; and  
6 further comprising:  
7  
8 means for also incorporating blue and green laser  
9 light into the picture beam, and  
10  
11 separate, additional liquid-crystal light valves for  
12 respectively impressing blue and green components  
13 of the image onto the blue and green light.

1 90. (new, to follow claim 89) The projector of claim 66,  
2 wherein:  
3 said light valve receives laser light components of  
4 three respective colors and impresses corresponding color  
5 components of the image onto the three respective light com-  
6 ponents, respectively, all within the same light valve.

1    91.    (new, to follow claim 90)    A laser projection system  
2    for forming an image on an irregular projection medium  
3    having portions at distinctly differing distances from the  
4    projector; said system comprising:  
5        laser apparatus for projecting a picture beam that  
6    includes laser light;  
7        a liquid-crystal light valve for impressing an image  
8    onto the beam; and  
9        means for projecting the beam from the light valve,  
10    with said impressed image, onto such irregular projection  
11    medium to form a substantially sharp image on such medium at  
12    such distinctly differing distances.



1 92. (new, to follow claim 91) The system of claim 91,  
2 wherein:

3 the irregular projection medium comprises one or more  
4 projection media selected from the group consisting of:

5  
6 an interior of a dome, or other building having  
7 internal surfaces that are not generally  
8 normal to a projection direction,

9 an exterior of a dome, sculpture, monument, or  
10 other structure having external surfaces that  
11 are not generally normal to a projection  
12 direction,

13 a waterfall,

14 a water fountain,

15 fog or a cloud,

16 ice,

17 a scrim in front of a curtain or screen,

18 a plurality of scrims in optical series,

19 one or more trees,

20 grass, vines or other foliage,

21 a hillside or other landscape, or other receding  
22 surface, and

23 an array of people or other animals or other dis-  
24 crete objects, or combinations thereof, at  
25 diverse distances from the projecting means;  
26 and

27  
28 the projection means form the substantially sharp image  
29 on substantially each element of the selected one or more  
30 media.

1 93. (new; to follow claim 92) A laser projector  
2 comprising:  
3 laser apparatus for projecting a picture beam that  
4 includes visible laser light of wavelength longer than 640  
5 nanometers; and  
6 a reflective liquid-crystal light valve for modulating  
7 the beam with a desired image.

1 94. (new; to follow claim 93) The projector of claim 93,  
2 wherein:  
3 said apparatus projects a beam of wavelength substan-  
4 tially 647 nanometers.

1 95. (new, to follow claim 86) The projector of claim 93:  
2 wherein the light valve impresses red components of an  
3 image onto the laser light of wavelength longer than 640  
4 nanometers; and  
5 further comprising:  
6  
7 means for also incorporating blue and green laser  
8 light into the picture beam, and  
9  
10 separate, additional liquid-crystal light valves for  
11 respectively impressing blue and green components  
12 of the image onto the blue and green light.

1 96. (new, to follow claim 95) The projector of claim 93,  
2 wherein:  
3 said light valve receives laser light components of  
4 three respective colors and impresses corresponding color  
5 components of the image onto the three respective light com-  
6 ponents, respectively, all within the same light valve.